

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 10/553,722
Source: P4710
Date Processed by STIC: 10/28/05

ENTERED



PCT

RAW SEQUENCE LISTING

DATE: 10/28/2005

PATENT APPLICATION: US/10/553,722

TIME: 09:25:36

Input Set : A:\BIOL0004USA Sequence Listing.txt

Output Set: N:\CRF4\10282005\J553722.raw

3 <110> APPLICANT: Isis Pharmaceuticals Inc.
 4 Rosanne M. Crooke
 5 Mark J. Graham
 6 Kristina M. Lemonidis
 7 Kenneth W. Dobie
 9 <120> TITLE OF INVENTION: MODULATION OF APOLIPOPROTEIN C-III EXPRESSION
 11 <130> FILE REFERENCE: BIOL0004WO
 C--> 13 <140> CURRENT APPLICATION NUMBER: US/10/553,722
 C--> 13 <141> CURRENT FILING DATE: 2005-10-14
 13 <150> PRIOR APPLICATION NUMBER: PCT/US2004/010946
 14 <151> PRIOR FILING DATE: 2004-04-15
 15 <150> PRIOR APPLICATION NUMBER: US 10/418,780
 16 <151> PRIOR FILING DATE: 2003-04-16
 18 <160> NUMBER OF SEQ ID NOS: 468
 20 <210> SEQ ID NO: 1
 21 <211> LENGTH: 20
 22 <212> TYPE: DNA
 23 <213> ORGANISM: Artificial Sequence
 25 <220> FEATURE:
 27 <223> OTHER INFORMATION: Antisense Oligonucleotide
 29 <400> SEQUENCE: 1
 30 tccgtcatcg ctcttcaggg 20
 33 <210> SEQ ID NO: 2
 34 <211> LENGTH: 20
 35 <212> TYPE: DNA
 36 <213> ORGANISM: Artificial Sequence
 38 <220> FEATURE:
 40 <223> OTHER INFORMATION: Antisense Oligonucleotide
 42 <400> SEQUENCE: 2
 43 gtgcgcgcga gcccgaatc 20
 46 <210> SEQ ID NO: 3
 47 <211> LENGTH: 20
 48 <212> TYPE: DNA
 49 <213> ORGANISM: Artificial Sequence
 51 <220> FEATURE:
 53 <223> OTHER INFORMATION: Antisense Oligonucleotide
 55 <400> SEQUENCE: 3
 56 atgcattctg cccccaagga 20
 58 <210> SEQ ID NO: 4
 59 <211> LENGTH: 3958
 60 <212> TYPE: DNA
 61 <213> ORGANISM: H. sapiens
 63 <220> FEATURE:

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65 <400> SEQUENCE: 4

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66 ctactccagg ctgtgttcag ggcttggggc tgggtggaggg agggggcctga aattccagtg      60
68 tgaaaggctg agatggggcc gagggccctg gcctatgtcc aagccatttc ccctctcacc      120
70 agcctctccc tggggagcca gtcagctagg aaggaatgag ggctcccag gccaccccc      180
72 agttcctgag ctcatctggg ctgcagggct ggcgggacag cagcgtggac tcagtctcct      240
74 agggatttcc caactctccc gcccgcttgc tgcatctgga caccctgcct caggccctca      300
76 tctccactgg tcagcagggtg acctttgccc agcgccttgg gtcctcagtg cctgctgccc      360
78 tggagatgat ataaaacagg tcagaacctt cctgctgtc tgctcagttc atccctagag      420
80 gcagctgctc caggtaatgc cctctgggga ggggaaagag gaggggagga ggatgaagag      480
82 gggcaagagg agctccctgc ccagcccagc cagcaagcct ggagaagcac ttgctagagc      540
84 taaggaagcc tcggagctgg acgggtgccc cccacccctc atcataacct gaagaacatg      600
86 gagggccggg aggggtgtca cttgccc aaa gctacatagg ggggtgggct ggaagtggct      660
88 ccaagtgcag gttccccct cattcttcag gcttagggct ggaggaagcc ttagacagcc      720
90 cagtcctacc ccagacaggg aaactgaggc ctggagaggg ccagaaatca cccaaagaca      780
92 cacagcatgt tggctggact ggacggagat cagtccagac cgcagggtgcc ttgatgttca      840
94 gtctgggtgg ttttctgctc catcccaccc acctcccttt gggcctcgat ccctcgcccc      900
96 tcaccagtcc cccttctgag agcccgattt agcaggggagc cggccctac tccttctggc      960
98 agaccagct aaggttctac cttaggggccc acgccacctc cccagggagg ggtccagagg      1020
100 catggggacc tggggtgccc ctacaggac acttcccttg aggaacagag gtgccatgca      1080
102 gccccgggta ctcttgttg ttgccctctt ggcgtcctg gcctctgccc gtaagcactt      1140
104 ggtgggactg ggtggggggc aggggtggag caacttggg caactgggct caatgggtgg      1200
106 tcaagcagga gccagggct cgtccatagg ccgatccacc ccactcagcc ctgctctttc      1260
108 ctcaggagct tcagaggccg aggatgcctc ccttctcagc ttcatgcagg gctacatgaa      1320
110 gcacgccacc aagaccgcca aggatgcact gagcagcgtg caggagtccc aggtggccca      1380
112 gcaggccagg tacaccgctt ggctccctc cccatccccc ctgccagctg cctccattcc      1440
114 caccaccccc tgccctgggt agatcccaac aatggaatgg aggtgctcca gcctccctg      1500
116 ggctgtgcc tcttcagcct cctctttcct cacagggctt ttgtcaggct gctgcgggag      1560
118 agatgacaga gttgagactg cattcctccc aggtccctcc tttctcccca gagcagtcct      1620
120 agggcgcgcc gttttagccc tcatttccat tttcctttcc tttccctttc tttccctttc      1680
122 tatttctttc tttctttctt tctttctttc tttctttctt tctttctttc tttctttctt      1740
124 tctttctttc ctttctttct tctttctttc ctttctttct tctctttctt tctctttctt      1800
126 tctttctttc tttccttttt ctttctttcc ctctcttctt tctctctttt ctttctttctt      1860
128 cttttttttt taatggagtc tccctctgtc acccaggctg gagtgcagtg gtgccatctc      1920
130 ggctcaactg aacctcgtc tcccgggttc aaccattctt cctgcctcag cctcccaagt      1980
132 agctgggatt acaggcacgc gccaccacac ccagctaatt tttgtatttt tagcagagat      2040
134 ggggtttcac catgttggcc aggttggctc tgaattcctg acctcagggg atcctcctgc      2100
136 ctgggctcc caaagcgtg ggattacagg catgagccac tgcgcctggc cccattttcc      2160
138 ttttctgaag gtctggctag agcagtggct ctcagccttt ttggcaccag ggaccagttt      2220
140 tgtgggtggc aatttttcca tgggcccagc gggatgggtt tgggatgaag ctgttccacc      2280
142 tcagatcctc aggcattaga ttctcataag gagccctcca cctagatccc tggcatgtgc      2340
144 agttcacaa acgggttcaca ctctatgag aatgtaaggc cacttgatct gacaggaggc      2400
146 ggagctcagg cggatttgc cactcacc caactcactt cgtgctgtgc agcccggtc      2460
148 ctaacagtcc atggaccagt acctatctat gacttggggg ttggggaccc ctgggctagg      2520
150 ggtttgcctt gggaggcccc acctgacctt attcaagccc gtgagtgtct ctgctttgtt      2580
152 ctaagacctg gggccagtgt gagcagaagt gtgtccttcc tctccatcc tgcccctgcc      2640
154 catcagtact ctctctccc ctactccctt ctccacctca ccctgactgg cattagctgg      2700
156 catagcagag gtgttcataa acattcttag tccccagaa cggctttggg gtaggtgtta      2760
158 ttttctcact ttgcagatga gaaaattgag gctcagagcg attaggtgac ctgccccaga      2820
160 tcacacaact aatcaatcct ccaatgactt tccaaatgag aggtgcctc cctctgtcct      2880

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Input Set : A:\BIOL0004USA Sequence Listing.txt

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162 accctgctca gagccaccag gttgtgcaac tccaggcggg gctgttttga cagaaaacaa 2940
164 tgacagcctt gacctttcac atctccccac cctgtcactt tgtgcctcag gccagggggc 3000
166 ataaacatct gaggtgacct ggagatggca gggtttgact tgtgctgggg ttcttgcaag 3060
168 gatatctctt ctcccagggg ggcagctgtg ggggattcct gcctgaggtc tcagggtgtg 3120
170 cgtccagtga agttgagagg gtgggtgggt cctgactggg gtcgtccagt ggggacatgg 3180
172 gtgtgggtcc catggttgcc tacagaggag ttctcatgcc ctgctctgtt gcttcccctg 3240
174 actgatttag gggctgggtg accgatggct tcagttccct gaaagactac tggagcaccg 3300
176 ttaaggacaa gttctctgag ttctgggatt tggaccctga ggtcagacca acttcagccg 3360
178 tggctgcctg agacctcaat accccaagtc cacctgccta tccatcctgc cagctccttg 3420
180 ggtcctgcaa tctccagggc tgcccctgta ggttgcttaa aaggggacagt attctcagt 3480
182 ctctcctacc ccacctcatg cctggccccc ctccaggcat gctggcctcc caataaagct 3540
184 ggacaagaag ctgctatgag tggggcgtcg caagtgtgcc atctgtgtct gggcatggga 3600
186 aaggggcag gctgttctgt ggggtgggac tggacagact ccaggtcagg caggcatgga 3660
188 ggccagcgct ctatccacct tctggtagct gggcagtcct tgggcctcag tttcttcac 3720
190 tctaaggtag gaatcaccct ccgtaccctg ccttccttga cagctttgtg cggaagggtca 3780
192 aacaggacaa taagtttctg gatactttga taaactgtta ggtgctgcac aacatgactt 3840
194 gagtgtgtgc cccatgccag ccactatgcc tggcacttaa gttgtcatca gagttgagac 3900
196 tgtgtgtgtt tactcaaaac tgtggagctg acctccccta tccaggccac ctageccct 3958

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199 <210> SEQ ID NO: 5

200 <211> LENGTH: 22

201 <212> TYPE: DNA

202 <213> ORGANISM: Artificial Sequence

204 <220> FEATURE:

206 <223> OTHER INFORMATION: PCR Primer

208 <400> SEQUENCE: 5

209 tcagcttcat gcagggttac at

22

212 <210> SEQ ID NO: 6

213 <211> LENGTH: 19

214 <212> TYPE: DNA

215 <213> ORGANISM: Artificial Sequence

217 <220> FEATURE:

219 <223> OTHER INFORMATION: PCR Primer

221 <400> SEQUENCE: 6

222 acgctgctca gtgcatcct

19

225 <210> SEQ ID NO: 7

226 <211> LENGTH: 21

227 <212> TYPE: DNA

228 <213> ORGANISM: Artificial Sequence

230 <220> FEATURE:

232 <223> OTHER INFORMATION: PCR Probe

234 <400> SEQUENCE: 7

235 aagcacgcca ccaagaccgc c

21

238 <210> SEQ ID NO: 8

239 <211> LENGTH: 19

240 <212> TYPE: DNA

241 <213> ORGANISM: Artificial Sequence

243 <220> FEATURE:

245 <223> OTHER INFORMATION: PCR Primer

248 <400> SEQUENCE: 8

RAW SEQUENCE LISTING

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Input Set : A:\BIOL0004USA Sequence Listing.txt

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249 gaaggtgaag gtcggagtc 19
252 <210> SEQ ID NO: 9
253 <211> LENGTH: 20
254 <212> TYPE: DNA
255 <213> ORGANISM: Artificial Sequence
257 <220> FEATURE:
259 <223> OTHER INFORMATION: PCR Primer
261 <400> SEQUENCE: 9
262 gaagatggtg atgggatttc 20
265 <210> SEQ ID NO: 10
266 <211> LENGTH: 20
267 <212> TYPE: DNA
268 <213> ORGANISM: Artificial Sequence
270 <220> FEATURE:
272 <223> OTHER INFORMATION: PCR Probe
274 <400> SEQUENCE: 10
275 caagcttccc gttctcagcc 20
278 <210> SEQ ID NO: 11
279 <211> LENGTH: 518
280 <212> TYPE: DNA
281 <213> ORGANISM: M. musculus
283 <220> FEATURE:
285 <400> SEQUENCE: 11
286 cctgctcagt tttatcccta gaagcagcta gctactccag gtacgtaggt gccatgcagc 60
288 cccggacgct cctcaactgtg gccctcttgg ctctcctggc atctgcccga gctgaagagg 120
290 tagagggatc cttgctgctg ggctctgtgc agggctacat ggaacaagcc tccaagacgg 180
292 tccaggatgc gctaagtagc gtgcaggagt ccgatatagc tgcgggtggcc aggggctgga 240
294 tggacaatca cttcagattc ctgaaaggct actggagcaa gtttactgac aagttcaccg 300
296 gcttctgcca ttctaaccct gaggaccaac caactccagc tattgagtcg tgagacttct 360
298 gtgttgccaga tgtgcctggt cctccatcct gctgcccccc tccaggcctg ccagggtggcc 420
300 cctgaagggt gctttaaggg gaaagtatgt tctcatgtct tcacccctcc ctagatctca 480
302 cctaaacatg ctgtccctaa taaagctgga taagaagc 518
304 <210> SEQ ID NO: 12
305 <211> LENGTH: 20
306 <212> TYPE: DNA
307 <213> ORGANISM: Artificial Sequence
309 <220> FEATURE:
311 <223> OTHER INFORMATION: PCR Primer
313 <400> SEQUENCE: 12
314 tgcagggcta catggaacaa 20
317 <210> SEQ ID NO: 13
318 <211> LENGTH: 20
319 <212> TYPE: DNA
320 <213> ORGANISM: Artificial Sequence
322 <220> FEATURE:
324 <223> OTHER INFORMATION: PCR Primer
326 <400> SEQUENCE: 13
327 cggactcctg cacgctactt 20
330 <210> SEQ ID NO: 14

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RAW SEQUENCE LISTING

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Input Set : A:\BIOL0004USA Sequence Listing.txt

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331 <211> LENGTH: 23
332 <212> TYPE: DNA
333 <213> ORGANISM: Artificial Sequence
335 <220> FEATURE:
337 <223> OTHER INFORMATION: PCR Probe
339 <400> SEQUENCE: 14
340 ctccaagacg gtccaggatg cgc 23
343 <210> SEQ ID NO: 15
344 <211> LENGTH: 20
345 <212> TYPE: DNA
346 <213> ORGANISM: Artificial Sequence
348 <220> FEATURE:
350 <223> OTHER INFORMATION: PCR Primer
352 <400> SEQUENCE: 15
353 ggcaaatcca acggcacagt 20
356 <210> SEQ ID NO: 16
357 <211> LENGTH: 20
358 <212> TYPE: DNA
359 <213> ORGANISM: Artificial Sequence
361 <220> FEATURE:
363 <223> OTHER INFORMATION: PCR Primer
365 <400> SEQUENCE: 16
366 ggggtctcgct cctggaagat 20
369 <210> SEQ ID NO: 17
370 <211> LENGTH: 27
371 <212> TYPE: DNA
372 <213> ORGANISM: Artificial Sequence
374 <220> FEATURE:
376 <223> OTHER INFORMATION: PCR Probe
378 <400> SEQUENCE: 17
379 aaggccgaga atgggaagct tgatcatc 27
382 <210> SEQ ID NO: 18
383 <211> LENGTH: 533
384 <212> TYPE: DNA
385 <213> ORGANISM: H. sapiens
387 <220> FEATURE:
389 <221> NAME/KEY: CDS
390 <222> LOCATION: (47)...(346)
392 <400> SEQUENCE: 18
393 tgctcagttc atccctagag gcagctgctc caggaacaga ggtgcc atg cag ccc 55
394 Met Gln Pro
395 1
397 cgg gta ctc ctt gtt gtt gcc ctc ctg gcg ctc ctg gcc tct gcc cga 103
398 Arg Val Leu Leu Val Val Ala Leu Leu Ala Leu Leu Ala Ser Ala Arg
399 5 10 15
401 gct tca gag gcc gag gat gcc tcc ctt ctc agc ttc atg cag ggt tac 151
402 Ala Ser Glu Ala Glu Asp Ala Ser Leu Leu Ser Phe Met Gln Gly Tyr
403 20 25 30 35
405 atg aag cac gcc acc aag acc gcc aag gat gca ctg agc agc gtg cag 199

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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 10/28/2005
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:223; N Pos. 53,63

VERIFICATION SUMMARY

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Input Set : A:\BIOL0004USA Sequence Listing.txt

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L:13 M:270 C: Current Application Number differs, Replaced Current Application No

L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:2896 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:223 after pos.:0

L:2898 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:223 after pos.:60